

Measurements of fluctuations in the hard x-ray background with RXTE

D.R. MacDonald, E.A. Boldt, A.C. Fabian, D.E. Gruber, R.F. Mushotzky

We have measured the fluctuations in the X-ray background (XRB) from 15-40 keV using differences between adjacent HEXTE background fields. The measured fractional fluctuations increase with energy, which implies that the effective number of contributing sources is decreasing with energy. The fluctuation level and decrease are consistent with HEAO-1 measurements to 80 keV. The number of sources dominating the XRB emission at these energies then must arise from a class of sources with a smaller spatial density than the Seyfert 1s which are thought to dominate the XRB emission at lower energies.